(No Model.)

G. GIBBS.

STOCK AND DIE FOR CUTTING METAL SCREWS.

No. 433,201. Patented July 29, 1890.

Fig. 1.

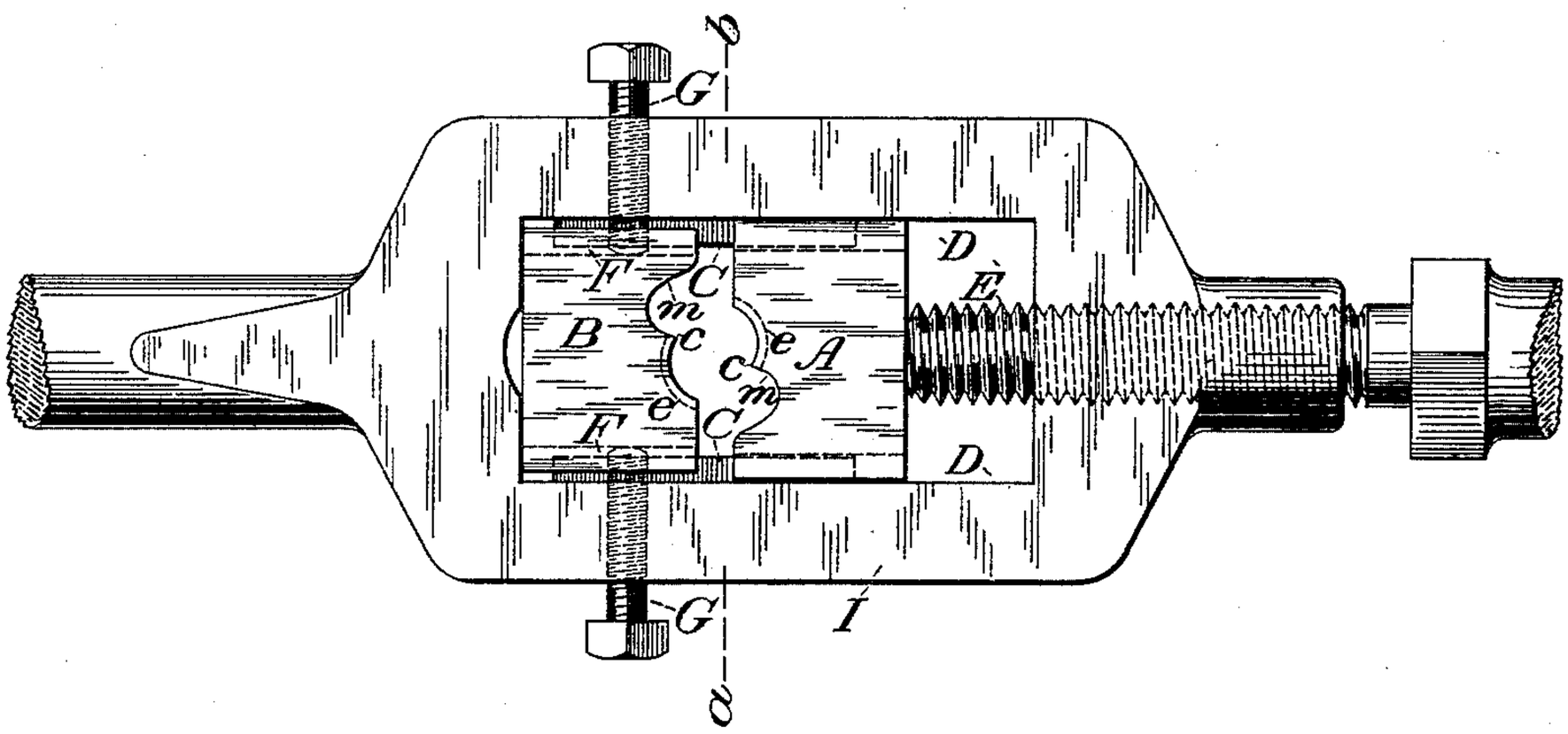


Fig. 3.

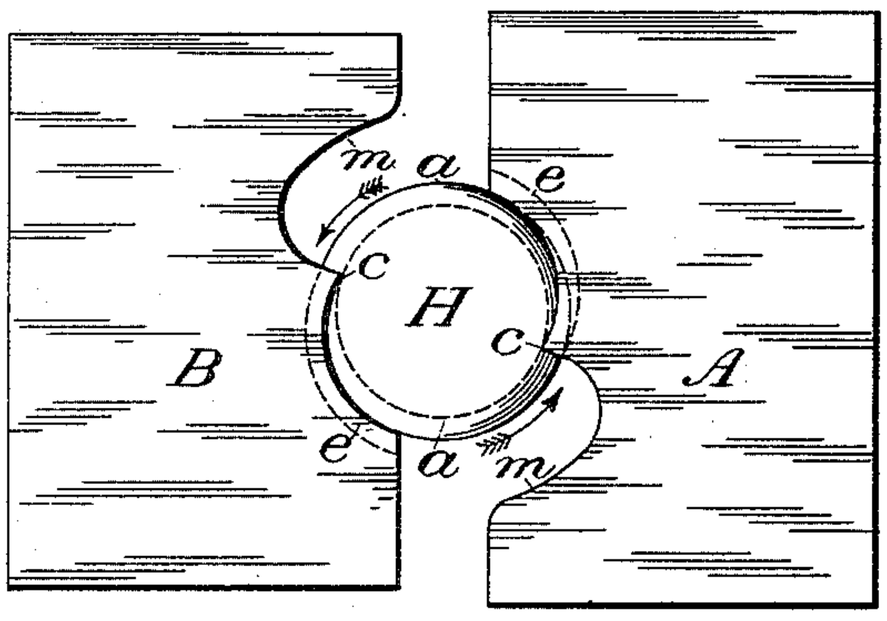
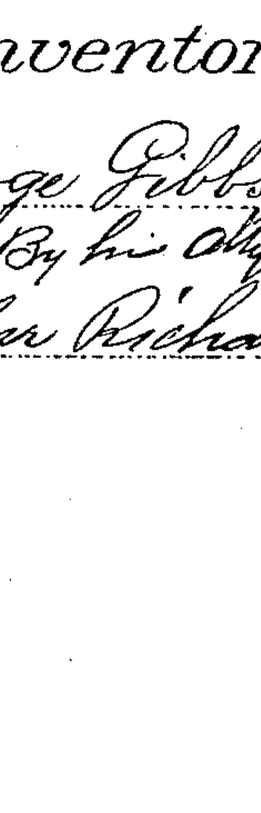


Fig. 2.



Witnesses:

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UNITED STATES PATENT OFFICE.

GEORGE GIBBS, OF SAN FRANCISCO, CALIFORNIA, ASSIGNOR OF ONE-HALF TO FREDERICK A. ROBBINS, OF SAME PLACE.

STOCK AND DIE FOR CUTTING METAL SCREWS.

SPECIFICATION forming part of Letters Patent No. 433,201, dated July 29, 1890.

Application filed April 4, 1890. Serial No. 346,518. (No model.)

To all whom it may concern:

Be it known that I, GEORGE GIBBS, of San Francisco, in the county of San Francisco and State of California, have invented certain Improvements in Stocks and Dies for Cutting Metal Screws; and I do hereby declare the following to be a true specification and description of the same.

This invention relates to what are called stocks and dies for cutting screws on metal rods, especially to such implements as are used by hand, although applicable in certain cases to machines or implements driven by power.

It consists in a lateral adjustment of the dies relatively, so that the bore or matrix through the dies will form two arcs of a circle eccentric to each other, and thus give a clearance behind the cutting-edges.

It also consists in a configuration of the dies on their cutting-faces to accommodate and render more effective the adjustment before named.

The method of constructing my improved dies and stocks is shown in the accompanying drawings, in which—

Figure 1 is a side view of a screw-plate or die-stock fitted in accordance with my improvements. Fig. 2 is a section on line *a b* of Fig. 1, showing the manner of adjusting the dies relatively; and Fig. 3 is a diagram, enlarged, to show the eccentricity and clearance of the cutting-faces attained by my method.

Referring first to Fig. 1, it may be seen that in order to apply my improvements the construction of ordinary die-stocks is not changed. The dies A and B are inserted and held in a plate or stock I in the usual manner, being supported laterally by a rectangular ledge C, which is cut away at D to permit the removal of the dies. The die A is fitted to slide loosely in its seat in the usual manner, and is adjusted by a screw-extension E of one of the handles. The die B is not fitted closely, but is permitted some movement laterally or across the plate, as indicated by the dotted lines at F, so that it can be adjusted by the screws G G and the matrix or center be put into the eccentric position shown in an exaggerated form in Fig. 3.

Referring to Fig. 3, the two concentric lines *a a* indicate extreme and core diameter of a screw H to be threaded, the dies A and B being adjusted relatively to produce the eccentricity or clearance shown by dotted lines at *e e*. This clearance, it may be noticed, extends nearly to the cutting-edges at *c c* as these edges approach a longitudinal center line through the dies.

At *m m* the dies are cut away, as shown. This clearance provides all the room required for the escape of chips. Consequently there is no need of grooves cut across the dies at their center, as has been the custom hitherto.

Having thus described my invention and the manner of applying it, what I claim as new, and desire to secure by Letters Patent, is—

1. In a die-stock, the combination of the cutting-dies, relatively adjustable in varying degrees to produce eccentricity of their inner or cutting faces, arranged and operating substantially in the manner and for the purpose specified.

2. In a die-stock, the adjustable die B, in combination with the set-screws G G, arranged to produce eccentricity or clearance of the cutting-edges, substantially in the manner described.

In testimony whereof I hereunto affix my signature in the presence of two witnesses.

GEORGE GIBBS.

Witnesses:

ALFRED A. ENQUIST,

B. HILL.